

Amendments to the Claims

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- ✓ 1. (Currently Amended) A method for reordering messages for
2 processing, the messages received from a communication network, each message
characterized by a source identifier and type, the method comprising:
4 providing a message store, the message store including a plurality of storage slots
configured to store messages received from the network;
6 providing a plurality of FIFO queues configured to store tags corresponding to the
messages, wherein each tag identifies the storage slot in which the corresponding
8 message is stored;
enqueuing a given message by including:
10 storing the given message in a given storage slot identified by a given tag,
when any slot is empty;
12 selecting one of the FIFO queues based at least on source identifier and
type for the given message; and
14 loading the given tag onto the selected FIFO queue.
- ✓ 2. (Original) The method of claim 1 further including:
2 selecting a message for dequeuing after the tag corresponding to the message is at
the head of one of the FIFO queues;
4 removing the tag corresponding to the selected message from the corresponding
FIFO queue; and
6 freeing the storage slot identified by the tag corresponding to the selected
message.
- ✓ 3. (Original) The method of claim 2 wherein selecting a message for
2 dequeuing further includes arbitrating for priority by applying a round robin priority
algorithm.
- ✓ 4. (Original) The method of claim 2 wherein selecting a message for
2 dequeuing further includes determining that resources are available for processing the

message.

✓ 5. (Original) The method of claim 4 wherein selecting a message for
2 dequeuing further includes arbitrating for priority.

✓ 6. (Original) The method of claim 1 wherein selecting one of the FIFO
2 queues includes ensuring that no two FIFO queues contain tags corresponding to
messages with the same source identifier and type.

7. (Original) The method of claim 1 wherein the number of FIFO queues
2 equals the number of storage slots.

✓ 8. (Currently Amended) A method for reordering messages for
2 processing by a node, the messages received from a communication network, each
message characterized by a source identifier and type, the method comprising:
4 providing a message store, the message store including a plurality of storage slots
configured to store messages received from the network;
6 providing a plurality of FIFO queues, ~~the queues containing~~ configured to queue
tags identifying the storage slots, wherein tags corresponding to each message stored in
8 the message store are queued in the FIFO queues when the corresponding messages are
stored;
10 selecting a given message for dequeuing from the message store after the tag
corresponding to the given message is at the head of one of the FIFO queues;
12 removing the tag corresponding to the given message from the FIFO queue; and
freeing the storage slot identified by the tag.

✓ 9. (Original) A method according to claim 8, wherein selecting a given
2 message for dequeuing further includes determining that the node has acquired resources
for processing the given message.

10. (Currently Amended) A method according to claim 8, wherein

2 selecting a given message for dequeuing further includes arbitrating for priority among
✓ multiple messages for which the corresponding tags are ~~tag is~~ at the head of different ~~one~~
4 ~~of the~~ FIFO queues and for which the node has acquired resources for processing the
given message.

C! ✓ 11. (Original) A method according to claim 10, wherein arbitrating for
2 priority includes applying a round robin algorithm.

12. (Currently Amended) A message reordering device for messages
2 received from a communication network for processing, each message characterized by a
source identifier and a type, the device comprising:

4 a message store, the message store including a plurality of storage slots
configured to store messages received from the network;

6 a plurality of FIFO queues configured to store tags corresponding to the
messages, wherein each tag identifies the storage slot in which the corresponding
8 message is stored;

logic for enqueueing a given message, wherein the enqueueing includes including:
10 storing the given message in a storage slot identified by a given tag, when
any slot is empty;

12 selecting one of the plurality of FIFO queues based at least on source
identifier and type for the message; and

14 loading the given tag onto the selected FIFO queue.

13. (Original) The device of claim 12 further including:

2 logic for selecting a given message for dequeuing;

logic for removing the tag corresponding to the given message from the
4 corresponding FIFO queue; and

6 logic for freeing the storage slot identified by the tag corresponding to the given
message.

14. (Original) The device of claim 13, wherein logic for selecting a given

- 2 message for dequeuing further includes logic for arbitrating for priority among messages for which the corresponding tag is at the head of any FIFO queue and for which the node
- 4 has acquired resources for processing the message.

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